

IA 1.33:994-98/ABR.

USIA Strategic Information Resources Management (IRM) Plan

Fiscal Years 1994-1998

Using Information Technology
to Reshape the Future



ABRIDGED VERSION

OFFICE OF TECHNOLOGY
PLANNING DIVISION

August 1993

**United States
Information
Agency**

Washington, D.C. 20547



August 6, 1993

Dear Colleague,


Attached is the abridged version of the *USIA Strategic Information Resources Management (IRM) Plan* for fiscal years 1994 through 1998. This version was prepared specifically for readers with limited time. It presents certain sections from the complete version of the plan. These sections provide highlights of the Agency's IRM objectives and initiatives underway as well as accomplishments during the past year.

All Agency posts, offices and divisions have the complete version of the plan for readers who need more information. The complete version of the plan contains the IRM plans of each organizational element and a full discussion of the Agency's six IRM goals.

Computer technology has forever changed the way we work. Most people would agree that automation has made improvements in our operations. The potential for even greater benefits can be achieved through a well planned and executed approach to the management of information technology. By presenting both the abridged and complete plans, we hope to promote discussion and debate on this important topic.

Please let us hear from you. If you would like a copy of the complete plan, please contact the Planning Division (M/TP) at 619-4443.

Sincerely,



John Condayan
Associate Director

STRATEGIC INFORMATION RESOURCES MANAGEMENT (IRM) PLAN

(Abridged Version)

FISCAL YEARS 1994 - 1998

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EXECUTIVE SUMMARY

INTRODUCTION

These are exciting times for technology and USIA, as the Agency welcomes Director Duffey and the new senior management team. The computer industry continues to present a vast array of services and products to help us do our jobs better. How do we best fulfill the Agency's mission, faced with this wide variety of choices? How do we train our worldwide staff to work productively in this rapidly changing environment? What impact will shrinking resources have on USIA's ability to manage its information resources effectively? What impact will the Administration's initiative on data "super highways" and the sharing of information have on us? The answers to these questions are important to USIA. This plan includes our current thinking about these issues, as well as a strategic vision of where USIA's Information Resources Management (IRM) program should be headed.

THE STRATEGIC IRM PLAN -- THE BENEFITS

This is the second edition of the Agency's Strategic IRM Plan. The Office of Technology (M/T) has been extremely pleased with the reception of the initial plan. A number of positive results have occurred. The plan has:

- helped generate a healthy internal dialogue about the current and future direction of USIA's IRM program;
- assisted in developing a consensus about our future direction among key players at USIA;
- established priorities for the expenditure of scarce personnel and monetary IRM resources; and
- helped educate staff about the impact of IRM on Agency operations.

PROGRAM and OPERATIONAL GOALS and AGENCY-WIDE IRM GOALS

It is important that the Strategic IRM Plan be driven by Agency program and operational goals and objectives. The most recent strategic Agency goals and objectives were published in September 1991. When the Agency-wide Goals are revised, the IRM Plan will be reviewed and changed accordingly.

The total projected cost for IRM technology for the full five years of the Plan is \$112.7 million. The projected requirements for the various Organization Plans is \$58 million, and projected requirements for the six Agency-wide IRM goals is \$54.7 million. *Please note that \$20.3 million (37 percent) of the six Agency-wide goals are directly targeted for overseas posts.* Of the remaining \$34 million, many of the objectives designed to achieve the six Agency-wide goals will

EXECUTIVE SUMMARY

benefit overseas posts directly. Charts depicting this information immediately follow this narrative on pages 7 - 8.

The six Agency-wide goals, within the Strategic IRM Plan, remain unchanged from the previous plan. These goals apply to the entire Agency and cross organizational boundaries. There were a number of accomplishments this past year working toward achieving these goals. There are 58 objectives in this new plan as targets for further progress.

To highlight some of the achievements and key objectives:

Goal #1- Modernize USIA's telecommunications networks so that every Agency computer workstation can communicate cost-effectively with any other workstation worldwide.

Major Accomplishments - FY 1993

- Established data telecommunications links in 16 locations in Eastern Europe (including 6 State sites where USIS is not currently operational). These quickly became one of the primary means of communicating with these key posts.
- Initiated one-way electronic mail (from Washington outbound) using the WORLDNET TVRO network. The system is currently operational in 45 posts worldwide.
- Adopted Da Vinci E-mail software as the Agency standard. This software is currently operating on half of the domestic LANs and at some overseas sites.
- Established Agency connection to the INTERNET network.

Key Objectives FY 1994-98

- Complete installation of seamless E-mail operations using Da Vinci software. Develop interface between Da Vinci and Binkley E-mail (Binkley is used for overseas transmissions.)
- Establish a telecommunications gateway to the Sprintnet commercial network, which will allow information to be passed to the White House, OMB, other agencies, and private institutions (funding already approved by the Resource Management Committee).
- Connect USIS installations to new State Department telecommunications network. Explore feasibility of using new State network for expanded services such as voice and compressed digital video.

EXECUTIVE SUMMARY

Goal #2- Modernize the agency's hardware and software infrastructure

Major Accomplishments - FY 1993

- Agency made a major commitment to replace Wang OIS proprietary systems. A number of domestic and overseas systems already have been replaced, and FY 1993 funding has been authorized for replacement of the balance.
- Began a major initiative to install PC local area networks (LANs) overseas. By the end of FY 1993 more than 70 LANs will be operational (approximately 60 percent of our overseas sites). The balance of the Wang OIS systems should be replaced in FY 1994.

Key Objectives - FY 1994-98

- Transfer the Manual of Operations and Administration (MOA) to compact disk (CD-ROM) format for release in late summer, 1993. Evaluate the feasibility of distributing other products in this same format.
- Replace Wang VS proprietary systems worldwide.
- Replace the current system in Washington for printing and distributing incoming cables with one that would deliver messages to offices electronically.
- Replace the Bureau of Broadcasting System for News and Programming (SNAP) system. Investigate whether this replacement program can meet Agency-wide longer-term needs as well.

Goal #3- Automate basic processes and streamline operations

Major Accomplishments - FY 1993

- Released Paradox 3.5 version of the Distribution and Records System (DRS) software. Paradox 4.0 version of DRS in final test.
- Decision was made to develop the overseas Financial Management Program (FMP) in Paradox and possibly Windows. Version 2.0 of the current FMP package was released to the field.
- Selected a forms generation software package (PerFORM) for Agency use, and designed and distributed a number of domestic and overseas forms.

EXECUTIVE SUMMARY

Key Objectives - FY 1994-98

- Develop model overseas posts to demonstrate the full potential of technology to post operations.
- Expand the number of electronic forms designed for both domestic and overseas offices.
- Develop an automated system for overseas installations to order programs, products and services from Washington.

Goal #4- Develop and maintain quality core administrative systems

Major Accomplishments - FY 1993

- Completed an Information Strategy Plan for administrative systems. The plan provides a blueprint or "architecture" for the integration of administrative information and systems.
- Assessment of USIA efforts to address critical weaknesses in our financial management systems was upgraded by OMB.
- Began development of a system to handle assignments of foreign service officers.
- Moved the Agency's Personnel System (PERSUADES) from a computer at Andrews Air Force Base to another base at San Antonio and improved overall service.

Key Objectives - FY 1994-98

- Modernize the Agency's Financial Management System (FMS):
 - Complete a Functional Area Analysis of the CORE Accounting System.
 - Complete a benefit/cost analysis of options for modernizing our current FMS system.
- Modernize the Agency's Personnel Management System.
- Modernize the Agency's Property Management System.
- Use the Information Strategy Plan (ISP) as a guide for future systems development.

EXECUTIVE SUMMARY

Goal #5- Develop program information systems for Agency-wide use

Key Objectives - FY 1994-98

- Complete an Information Strategy Plan for agency program information and systems. The plan would provide a blueprint or "architecture" for integration and sharing of program information, and the development of program support systems.
- Update the Public Diplomacy Query (PDQ) system.
- Develop a Foreign Policy Database of policy statements from all foreign affairs agencies.
- Develop a central database of country information.

Goal #6- Provide effective management and use of information resources and concepts

Major Accomplishments - FY 1993

- Established a Senior Technology Steering Committee to assist in providing overall direction to the Agency's IRM program.
- Doubled the amount of automation training classes provided to overseas posts (from six to twelve).
- Increased the number of site visits to overseas posts to approximately 30 percent of the posts per year.

Key Objectives - FY 1994-98

- Continue to promote cooperation within the USIA IRM community.
- Increase the amount of computer training offered to employees worldwide.
- Increase the number of on-site visits to overseas posts for the purpose of providing automation support.
- Tie the IRM planning process more closely with the budget decision-making process. Attempt to establish IRM expenditures as permanent line items in budgets to reduce the reliance on fiscal year-end fall-out funds.

EXECUTIVE SUMMARY

Other Sections Recommended for Executive Reading:

- The cost charts immediately following the Executive Summary *
- Management Issues for Success *
- Major Initiatives Underway *
- Future Directions *
- Your specific organization plan
- The IRM Goal of most interest

Explanation of charts on resource requirements

Chart 1 shows a breakdown of the resources required for IRM technology for the next 5 fiscal years. This breakdown includes: The Agency's six IRM goals that will support the Agency's strategic objectives; the Overseas portion of the Agency-wide goals; the major Bureaus (B, E, M, P) and other Agency offices grouped as one unit on the chart (Office of the Director, Office of the Inspector General, Office of Public Liaison, Office of the General Counsel, Office of Congressional Liaison, and the U.S. Advisory Commission on Public Diplomacy.)

Chart 2 shows a breakdown of resource requirements for each of the six IRM goals by fiscal year.

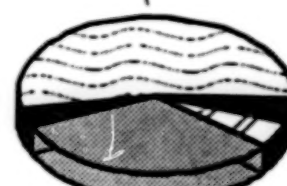
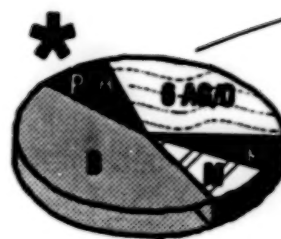
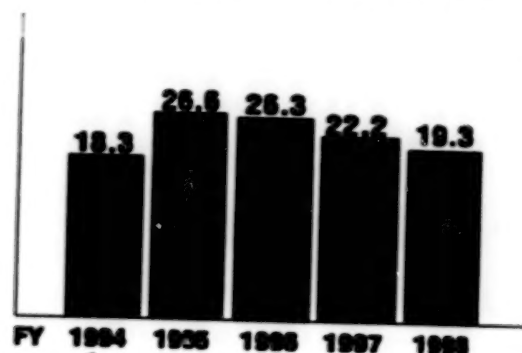
* Both versions of the IRM Plan contain this section.

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Required Resources for IRM* Technology

* Information Resources Management

\$mil



FY 1994

FY 1995

FY 1996

FY 1997

FY 1998

Agency Element

Agency Element	\$	%	\$	%	\$	%	\$	%	\$	%
6 AG - 6 Agency Goals	1,585	8	9,825	37	11,174	43	7,833	32	4,768	25
O - Overseas	4,138	23	4,410	17	3,968	15	3,950	18	3,934	20
P - P Bureau	636	3	690	2	815	2	636	3	636	3
B - B Bureau	8,308	46	8,520	32	7,567	29	7,610	35	7,829	37
M - M Bureau	1,069	6	1,429	5	1,338	5	1,417	6	1,419	7
E - E Bureau	1,342	7	1,385	5	1,300	5	1,200	5	1,250	6
A - Agency Offices **	679	4	414	2	355	1	329	1	332	2
TOTAL	18,294	100	26,583	100	26,304	100	22,174	100	19,340	100

**Agency Offices - Office of the Director (D)
Office of Inspector General (OIG)

Office of Public Liaison (PL)
Office of General Counsel (GC)

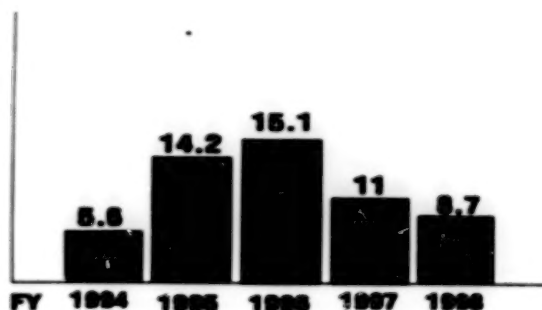
Office of Congressional Liaison (CL)
U.S. Advisory Commission on Public Diplomacy (AC)

CHART 1 7

PL 2.00V

Required Resources for 6 Agency Goals

\$mil



*



FY 1994



FY 1995



FY 1996



FY 1997



FY 1998

*

6 Agency Goals

	\$	%	\$	%	\$	%	\$	%	\$	%
#1 Upgrade Agency Telecommunications Network	683	12	771	5	1,009	7	1,282	12	1,386	16
#2 Modernize Technology & Software Infrastructure	595	11	4,458	31	4,615	30	3,200	29	1,825	21
#3 Refine/Revise Processes & Streamline Operations	1,183	21	2,400	17	2,528	17	1,838	17	1,488	17
#4 Produce Quality CORE Automated Administrative Systems	1,783	32	3,953	28	3,763	25	2,398	22	2,275	26
#5 Develop Program Information Systems for Agency-wide use	295	5	700	5	1,520	10	936	8	555	6
#6 Provide Effective Mgmt & Use of Information Resources & Concepts	1,102	20	1,867	13	1,627	11	1,337	12	1,177	14
TOTAL	5,641	100	14,235	100	15,140	100	10,983	100	8,684	100
Overseas Portion	4,136	73	4,410	31	3,966	26	3,950	36	3,934	45

CHART 2

MANAGEMENT ISSUES FOR SUCCESS

There are several management issues that are essential to the success of all the IRM goals contained in this Plan. An understanding of these issues will, it is hoped, unify USIA executives behind a comprehensive approach to managing IRM.

Strategic Vision - The Agency's top managers must set the strategic goals for USIA. IRM initiatives must then be aligned with the Agency's strategic goals. The link between strategic and IRM goals provides the focus for selecting projects to achieve specific objectives.

IRM Vision - All Agency elements participated in the development of this edition of the IRM Plan, and it reflects an agency-wide agenda for using technology to fulfill USIA's mission. The need to continually refine this vision of information resources management is a challenge that faces senior management within the agency. The recent formation of a Technology Steering Committee will ensure guidance from the highest level within the agency.

Innovation, Cooperation, Coordination, Communication, Consolidation - USIA managers must recognize that the potential benefits of the goals contained in this plan can only be successfully attained through joint effort and commitment. One hallmark for success is cooperation to reach maximum effectiveness. Projects must be coordinated among the appropriate USIA offices. Innovation needs to be encouraged and recognized. And when appropriate, managers need to consolidate resources.

Funding and Setting Priorities - Very few of the objectives contained within this plan can be achieved without funds. It is critical for USIA managers to adequately fund those projects selected for implementation. The senior-level Technology Steering Committee is expected to assist the Director in establishing priorities and obtaining necessary resources.

A permanent budget for information technology needs to be adopted. This budget would include:

- a capital acquisition budget for replacement and upgrades of hardware and software;
- system maintenance (this is generally all that is contained in the budget now);
- software development and revision; and
- training (there already is a small budget).

Focus on the Customer - Employees in the Agency who use computer equipment and software each day must have reliable and capable tools to perform their work effectively. This means providing the best support possible when problems occur. It also means introducing new technology to improve the quality, quantity, ease, effectiveness and efficiency of the work. Steps

MANAGEMENT ISSUES FOR SUCCESS

are needed to ensure that technical support is adequate--in some cases these steps may require realignment of resources.

Modernization of Hardware - Antiquated equipment hampers our ability to increase productivity and is costly to maintain. Many of the Agency's goals to improve telecommunications and provide better tools at the employee's desktop require new equipment.

Modernization of Software - Many of the agency's essential information systems are very old, not integrated and are a patchwork of quick fixes. The agency must use the latest techniques in rebuilding this important information infrastructure to satisfy the requirements of managers and employees. The Office of Technology has begun to build its information systems architecture which will lead to integrated systems that will share common databases, streamline operations and improve productivity.

Technical Training - Successful use of computer technology requires training. The better trained the work force, the better the productivity. In Fiscal Year 1993, \$90,000 was devoted to modernization automation training domestically--this equates to less than \$25 per employee. Funds for this aspect of modernization must be increased.

Performance Measurement - Agency managers need to evaluate the effectiveness of various IRM projects. It will take some time to formulate meaningful measurements, but they are needed.

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MAJOR INITIATIVES UNDERWAY

This section contains brief descriptions of prominent initiatives underway within the Agency. A brief discussion of the current situation will precede the major initiatives.

CURRENT SITUATION

The Information Strategy Plan (ISP) (discussed as a major initiative below) contains a thorough overview of the current hardware and software environment that exists in the Agency during the summer of 1993. Rather than repeat the information contained in that report, this version of the Strategic IRM Plan will briefly discuss the current situation and then emphasize an important factor that is critical to the success of the Agency's various IRM goals. That factor is best characterized as a spirit of cooperation.

USIA has an array of computer hardware and software among the various Bureaus and overseas posts. There are over 60 local area networks (LAN) installed domestically. All of these LANs provide typical office automation applications such as word processing, spreadsheets and electronic mail. There are also domestic offices with Wang OIS equipment. There are several CORE administrative systems, such as Financial Management, that operate on a Wang VS. There are other Agency-wide CORE systems that operate on an IBM 4381. There is an extensive workstation environment (1,200 workstations) within the Bureau of Broadcasting called SNAP (System for News and Programming). SNAP provides office automation software as well as special features for preparing material in over 40 different languages. In the Bureau of Broadcasting there are also LANs and Wang OIS equipment. Overseas there is also a variety of hardware and software platforms: PC LANs which are growing in number, Wang OIS equipment (which should all be replaced during Fiscal Year 1994) and Wang VS minicomputers.

Despite the wide array of hardware and software, the Agency has done an excellent job in providing connectivity between domestic and overseas offices. There are various methods used to transmit program information overseas daily. These communication links will improve further as USIA takes advantage of the new State Department Frame Relay System being installed over the next five years.

IRM COOPERATION IS GROWING

The IRM community within the Agency has long recognized the importance of consulting others who have faced similar challenges. Efforts to collaborate are expanding. For example,

- the Technology Coordinators are meeting on a regular basis to discuss important issues;
- within the last year several important software standards were adopted—these standards were developed in conjunction with the Technology Coordinators;
- senior management has established a high-level Technology Steering Committee (also discussed below) comprised of senior managers from the various Bureaus that will provide overall direction for IRM issues from the Agency's highest levels;

MAJOR INITIATIVES UNDERWAY

- the Information Strategy Plan was developed by a team of employees from various Bureaus, and they interviewed over 60 people within the organization who took the time to participate in the effort;
- the SNAP replacement project (described below) has begun with a commitment to cooperation among the various components of the Bureau of Broadcasting and sharing information with the Office of Technology.

These are very good indications that technical issues are being addressed openly within the Agency. More and more IRM activities are being conducted jointly, for the mutual benefit of all elements.

AGENCY-WIDE INITIATIVES

Technology Steering Committee

In January 1993, a senior level Technology Steering Committee was formed. The Associate Director for Management, who is also the Agency's Senior Information Resources Management Officer, serves as the Chair for the committee. There are six members: Associate Directors, or their Deputies, and two Area Office Directors. This group has multiple roles: to provide a direction for technology within the Agency, decide technology priorities, request necessary resources, review and redirect the progress of various high level projects, review and approve major acquisitions, and approve the Agency's goals as contained in the Strategic IRM Plan.

Information Systems Architecture

Many of the Agency's automated systems are old, not integrated, difficult and costly to maintain, poorly documented, and inefficient to operate.

To address this need, in 1992 the Office of Technology adopted a state-of-the-art methodology for systems development and management, which is widely used in private industry and is starting to make in-roads into the public sector. It is called Information Engineering. A key component of this process is the development of an information systems architecture, that is, blueprint. The development and maintenance of this architecture is the only way to ensure that automated systems are truly integrated, share information, and meet Agency needs. In January 1993, development began on the information systems architecture for administrative operations. This initial effort is completed. The results include an information strategy plan, systems architecture and technical architecture.

This information will be used as the basis for future administrative systems development. It will also be used to make a decision on the replacement or modernization of our current Financial Management System (FMS) (see below). The completion of this architecture is a critical first step in the modernization of our information systems. The current effort is being driven primarily by the FMS project, but there are additional plans for a tandem effort to design the architecture for program operations.

MAJOR INITIATIVES UNDERWAY

Financial Management System

This is a high priority for the Bureau of Management.

Financial systems are critical to any organization. Several years ago the Office of Management and Budget (OMB) declared that USIA's financial systems were a "high-risk internal weakness" that needed to be corrected. The Office of Technology and the Office of the Comptroller are working together to correct problems with the current financial systems.

Over a year ago, a five-year plan was prepared for improving financial management systems within the Agency. Approximately 30 separate projects have been identified under the Financial Management System improvement project and are contained in the plan. It will take several years to complete all of these projects.

An in-depth analysis of the financial area has begun (following the ISP effort described above) to define current Agency requirements and ensure compliance with applicable federal regulations. After this functional area analysis is completed, a benefit/cost analysis will be conducted to determine the best method for correcting problems and meeting defined systems requirements. The Agency will purchase an approved accounting package, or it will rebuild its current systems – this depends on the results of benefit/cost analysis. In either case, this effort will dramatically revise and improve financial operations within USIA.

During the past year, OMB has been briefed on our efforts in this area, and it agrees with our approach. The current target for completion is the end of FY 1996. One and one-half million dollars were allocated for this project in both FY 1992 and 1993, and this same amount is contained within the FY 1994 budget request. For Fiscal Years 1995 and 1996, current projections exceed \$3 million per year.

Wang Replacement Strategy

In the 1980's, the Agency purchased equipment and software under a State Department contract with Wang Laboratories, Inc. to meet its office automation needs. For many years, the platform that was created with Wang items satisfied that requirement. In the early 1990's, it became apparent that it was time to move from this proprietary, and expensive, environment. Many other private and government organizations were ahead of USIA in the shift to IBM-compatible microcomputers linked via LANs. The Agency is committed to continuing the move away from Wang proprietary systems and installing LANs both domestically and overseas.

The Agency anticipates approval of funds, this year, to proceed with the complete replacement of its Wang OIS equipment. Replacement of the larger Wang VS hardware and conversion of software systems that run this platform will take longer to complete – this activity is targeted in the FY 1995 budget.

MAJOR INITIATIVES UNDERWAY

INCABLE

The purpose of this project is to use the interconnection among domestic LANs to distribute incoming cable messages to addressees. Once implemented, the INCABLE Project will reduce the time for receipt of delivery of messages, permit offices to retrieve messages electronically, reduce the use of paper, and provide employees with ready access to a database of past cable traffic via LANs connected to the Agency's backbone network. The total cost of the project was \$2 million in FY 1992 and \$.5 million in FY 1993.

There is a companion effort called OUTCABLE which permits employees to use LANs to prepare cable messages and route them electronically, rather than hand carry them to the Communications Division for distribution. This system has operated successfully for two years.

Electronic Mail

There are currently more than 1,500 mailboxes with over 100 overseas posts connected. The system works well, but our goal is to provide each domestic and overseas employee with a simple method for communicating via electronic mail.

With this goal in mind, Da Vinci software was selected as the Agency's standard electronic mail package in FY 1992. During FY 1993, Da Vinci will be installed domestically on all LANs. As funds become available for necessary software, overseas posts will be added to an Agency-wide electronic mail network. The Office of Technology's Computer Management Division, and the Information Center, have the lead on this important project.

Support of LANs

Over the past few years, many domestic organizations have installed LANs with over 1,200 microcomputers. This rapid movement to microcomputers connected via networks has placed a severe strain on the staff assigned to provide support. To provide better service to employees, the Office of Technology will establish a Help Desk, a single point of contact, for receiving and tracking calls for assistance from domestic employees.

Overseas Support

The move of overseas posts from old computer systems to new microcomputer LAN technology has greatly increased demand from the field for computer training and support. Attempts to provide adequate service have been hampered by limited resources (travel and training funds). A budget increase in FY 1993 has allowed expanded computer training and on-site support visits for overseas posts. Although services are still short resources to adequately address all overseas needs, this increase has been significant.

MAJOR INITIATIVES UNDERWAY

ORGANIZATIONAL ELEMENTS

There are many projects worth noting for Overseas Posts. Among them is the joint effort between M/T and the Office of American Republics Affairs to more fully develop automated operations at posts. The goal is to use the latest technology for post operations and provide a model of possible office systems for all posts. This project will take several years to complete and other posts may participate as various parts of the project unfold. Many posts have already received PC-LANs, and eventually all offices will have this equipment. There are plans to expand the use of telecommunications to distribute agency products, improve the use of desk top publishing, and enhance post specific software such as the DRS and the FMP.

The Office of the Voice of America Programs (B/VOA) is continuing its effort to complete a two-year project to modernize the System for News and Programming (SNAP). SNAP is a large, closely-coupled office automation inter-network (wide area network) that functions in English and all 48 VOA foreign languages. The Bureau of Broadcasting has also begun a multi-year effort to design and then acquire a new common hardware and software platform that will satisfy all components of the Bureau and provide ready access to rest of the Agency. The target for replacement of hardware and software now operating in the B Bureau is Fiscal Year 1996. The experiences gained during this project could serve as a guide for other major Agency procurements in the future.

The Office of Engineering and Technical Operations (B/E) is continuing its network integration of the B/E directorate LANs and also the integration of the B/E LANs with the domestic and overseas Relay Station LANs to create a VOA global communications and local area network .

The Office of Worldnet Television and Film Service (B/TV) is upgrading the Worldnet Multiple Language Computer Network to include additional languages and software, and to continue to provide automated support for foreign language scripts and other B/TV production productivity aids.

Bureau of Policy and Programs (P) - A major modernization effort was initiated two years ago to replace the Press and Publication Service's aging Wireless File production environment. Work continues on this PC LAN-based system that has increased overall capability and capacity. The Wireless File (texts of major speeches, statements, articles, and selected materials from U.S. publications) is transmitted to USIA's Overseas Posts six days a week. Posts can now easily adapt the file and insert Post-specific items, when necessary. All magazines are now produced on PC-based systems and transmitted to Agency printing facilities in Vienna and Manila for printing and distribution.

Bureau of Educational and Cultural Affairs (E) - The E Bureau is developing a Grants Management System (GMS) to track solicitations, proposals and grants; monitor exchange projects and participants; and evaluate program activities. The system will replace a variety of small E and Management (M) Bureau grants systems and eliminate unnecessary duplication of grants data.

MAJOR INITIATIVES UNDERWAY

The Bureau of Management (M) is continuing the coordinated effort aimed at improving its overall office automation environment throughout the entire bureau. Several of the objectives to achieve this goal include the replacement of the remaining OIS equipment with state-of-the-art local area networks, interconnected with each other; enforced use of standard versions of LAN software for all users; configuration and installation support for LANs; and centralization of the function of LAN System Managers and LAN System Analysts, with a combination of Agency employees and contractors.

ME:WET

OFFICE OF TECHNOLOGY RECOMMENDATIONS

NOTE: The Agency's Senior Technology Steering Committee was selecting priorities while this version of The Five Year IRM Strategic Plan was being published. When the Committee's priorities are established, they will be published and appear in next year's plan.

(Initiatives below not in priority order.)

Replace Wang VS Systems (Office automation systems)- Replace Wang VS systems used primarily for office automation with PC LANs (e.g., Area offices, some M offices, large overseas posts). (Goal 2, objective 2)

Why?- Wang systems are old, limit employees' ability to perform some functions and are costly to maintain.

Seamless Agency-wide E-mail- Install seamless electronic mail on all Agency systems using Da Vinci software for PC LANs. Interface Binkley and Da Vinci E-mail systems. (Goal 1, objective 3)

Why?- Will allow all offices to communicate easily and cost-effectively. Increases productivity and efficiency.

Connect Posts to New State Department Telecommunications Network- As State Department installs the new network, connect USIS offices. Evaluate benefit/cost of the new network for expanded services such as voice, compressed digital video. (Goal 1, objective 6)

Why?- Agency access to new State network will greatly improve the capabilities at most USIS posts to communicate. Speed of data communications will be much faster than current service, and the Agency will have access to expanded services such as databases in the U.S. State will not charge for enhanced data telecommunications services at 9,600 bits per second. Voice and video will cost additional.

Increase M/PT Budget for Computer Training- Increase automation training offered domestically by M/PT. (Goal 6, objective 1)

Why?- Current M/PT budget is extremely low (only \$90,000 for all of Washington). There is a large need and few resources available. The lack of training limits the effectiveness of investments in automation.

New Financial Management System - Continue with the projects contained within the Five-Year Financial Management Plan. (Goal 4, objective 1)

Why?- Financial management affects virtually every Agency office. The current system is old and is on an OMB list as a "high-threat, critical weakness." Progress is monitored closely by OMB and OIG.

OFFICE OF TECHNOLOGY RECOMMENDATIONS

Sharing Information for Program Purposes- Complete an information systems architecture for Agency program operations. This would be needed to develop many of the databases proposed for sharing information in the development and management of programs and products. (Goal 5, objective 9)

Why?- Would eliminate duplication of effort (maintaining the same information in many offices), and identify opportunities for new programs, products or services.

Develop Model Overseas Posts for Automation- Using AR as a pilot, develop model automation posts for demonstrating the potential of technology to automate basic office processes and improve productivity.

Why?- Effort can be used as an example for posts worldwide. It will act as a catalyst for moving those posts ahead that have been lagging. It will generate new applications that can be used by other posts. (Goal 3, objective 9)

Replace Wang VS Systems (Core M/TM machines including reengineering applications)- Replace Wang VS systems used for core administrative systems (e.g., Accounting systems front-end, D/SS Correspondence Management System, etc.) and for Wang E-mail networking. (Goal 2, objective 2 and Goal 3, objective 2)

Why?- Wang systems need to be replaced. Software applications are mission-critical (e.g., Accounting System Front-end, telecommunications).

Encourage the Sharing of Software Applications Developed by Overseas Staff - Establish an annual awards program to recognize and encourage the development of software applications by overseas staff. (Associated with Goal 6, objective 6)

Why?- Will accelerate the application of automation to increase efficiency, and reduce costs by eliminating duplication at overseas posts. The amount required is very small when compared with the large payback from the new automation applications that would be made available.

Establish Base Program to Keep the Technology Infrastructure Current and Reduce Costs - Establish a program to continually upgrade and replace Agency hardware and software. Includes keeping current on software releases. Establish site licenses where feasible for standard software programs. (Goal 2, objective 5)

Why?- Reduce costs and increase standardization and compatibility among systems.

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The Agency is now facing one of the greatest challenges in its history. While the rapidly changing world is making great demands on the Agency to revise existing products and services and create new ones, Agency resources have not been increased to meet the new requirements. In fact, many resources are shrinking.

Fortunately, recent advances in computer technology can be employed that will not only alleviate this problem but provide a new level of performance throughout the Agency. These advances in technology will allow individuals to work better and communicate more efficiently with others. Individuals will be able to *directly* query databases both within and outside of the Agency. Routine status of schedules, inventories, projects, requisitions, purchase orders, contracts, etc., will be obtained directly from databases and distributed throughout the Agency. Electronic signatures on word processing type documents (e.g., requisition, purchase orders) will allow more information to flow electronically through the Agency. Large bodies of information (e.g., The Agency's Manual of Operation and Administration (MOA)) will be stored on CD-ROM [Compact Disk - Read Only Memory] for easy electronic retrieval.

The Agency will also exert a concerted effort to manage the planning, procurement and implementation of Agency-wide technology (*not* Bureau-specific technology). In summary, the successful future direction of technology is characterized by implementing Management, Network and Technology changes.

Management Focus - In order to better manage Agency-wide technology the Agency will:

Budget - *Develop a closer relationship between the IRM Plan and the budget Process.*

Planning- *Expand the use of the USIA Strategic Information Resources Management (IRM) Plan as the primary vehicle for identifying technology resources needed by the Agency for a five fiscal year period.*

Priorities - *Establish priority order for objectives within the IRM Plan, by the newly formed Technology Steering Committee. The Technology Steering Committee consists of top Bureau and Area Office management. The prioritized plan will be used to obtain resources from the Agency (e.g., Resource Management Committee). Priorities will be based on quantitative criteria.*

Overseas Mission -

Develop a coordinated approach with other U.S. Foreign Service agencies colocated in U.S. Missions overseas. It is important for the overseas mission to recognize the importance of combining knowledge and resources, within

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limits (i.e., we cannot coordinate with all State's systems, especially classified), when installing and operating computer technology.

Teams - *Assemble special project teams, representing all of the Agency's Bureaus, to work on projects that have Agency-wide implications. Members of a team will have expertise in subject matter areas that are critical to the success of the project. The recently formed project team, to develop the Agency's Information System Plan (ISP), is a good example of how multi-disciplinary teams will be formed for special projects.*

Performance Measurements -

Develop a quantitative basis for evaluating the priorities and progress of the objectives set forth in the USIA Strategic Information Resources Management (IRM) Plan.

Open Systems -

Develop an open systems environment with other government agencies that would allow for the exchange of data electronically.

Information Engineering -

More information systems will be developed under the Information Engineering Methodology. CASE tools will become widely used; detailed functional area analyses will be used to define system requirements; quality assurance measures will be in place to ensure proper design, operation and subsequent revision of systems; business process reengineering methodology and tools will be used as legacy systems are redesigned.

Network Changes - Networks fall within two broad categories: wide area networks (WANs) and local area networks (LANs).

WANs - As the name implies, WANs are networks that exist outside of an organization such as USIA. These networks are the vehicles by which information is transmitted worldwide. The Agency will establish the following:

INTERNET- *Subscribe to the INTERNET service. This is the worlds largest WAN, linking thousands of databases worldwide. By using INTERNET, Agency employees will be gaining access to databases instantaneously. Prior to INTERNET this information either was not available or, if available, required many phone calls and mail service to order and receive.*

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State Frame Relay System - Link to the State Department Frame Relay System—gaining two-way communications with overseas posts. This network will also provide easier, faster (in many cases), better, and cheaper access to overseas posts. This system will take 5 years to be implemented.

Data Superhighway - Investigate the Agency's relationship with the Information Superhighway. The newest WAN that the Agency will use when offered will be the Information Superhighway that this administration is championing. The Data Superhighway is a fiber optic network that will span this country. The volume of data that can move through this medium is truly amazing (e.g., a full set of encyclopedias every second). Databases that are large and impractical to send by the normal telecommunications methods would be ideal to send through the Data Superhighway.

LANs -

The term local area networks applies to networks within a specific geographical location of an organization. LANs provide a base for the following operations:

Washington Backbone - In the future all domestic computer work-stations will be interconnected via the Washington Backbone. This access will provide a pathway for employees to communicate within any employee in the Agency. It will provide a pathway to access shared databases. There will need to be increased capacity built into the backbone to handle to increased flow of data.

Client Server Technology - Determine the scope to which client server technology could be implemented within the Agency. In a client server environment an individual (client) at a computer work-station issues a request for information to a LAN file server (the server). Obtaining the information requested could range from the combining of many data files located on the LAN that the work-station is directly attached to or accessing many files on several LANs located in several organizational elements. The degree to which client server technology can be implemented depends on factors such as USIA's corporate culture (i.e., willingness to share information and agree to standards) and available resources.

Technology Changes

Compression Technology - Investigate a basic technology that forms a common thread through many of the Agency's present and future technology development efforts (e.g., imaging, CD-ROM, graphics and networks, distributed database networks plus the Data Highways). Very simply, compression is the ability to reduce the size of files. This allows files to be transmitted quickly and also allows more data to be stored on hard and floppy disks. When transmitted data files are received, they are reconstructed to their original size. Compressed files on hard and floppy disks are reconstructed on demand by user

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commands or through an application that reconstructs the file(s) automatically. Good compression of files, to date, has been approximately 20 to 1. That is, the compressed file is one twentieth (1/20) the size of the original. Compression technology has an important role in the following three areas:

Imaging - *Proceed with "enabling" imaging implementation in selective Agency offices.* Last year the assessment on imaging technology in the five year IRM plan was that it was "too expensive for Agency applications." During the past year, imaging technology, that had previously been designed and marketed exclusively for enterprise-wide implementation went through a downsizing revolution. Now, there is an "enabling" imaging implementation mode where an imaging system is integrated into an existing application (e.g., Grants Management, Financial Management). Only documents relevant to the specific application system are captured and stored. The retrieval capability of a document image is programmed directly into an application program. While the cost of enterprise-wide imaging systems can easily start at between \$500,000 and \$1,000,000, "enabling" technology can start at the \$20,000 to \$30,000 level. The Agency is proceeding with "enabling" imaging in Grants Management (E Bureau) and will be examining a system for the Office of Security (M/S).

Compact Disk - Read Only Memory (CD-ROM) - *Continue to expand the use of CD-ROM.* In addition to the MOA/CD ROM, now undergoing final testing, before being distributed world-wide, other subject areas will be investigated (e.g., the Agency's Strategic Information Resources Management Plan, PDQ). With new space on the CD-ROM disk, gained by the new compression technology (discussed above), the use of animation, sound and video will be investigated. With these capabilities, the uses of CD-ROM will increase dramatically. The CD-ROM can contain interactive multi-media training applications for off-the-shelf packages (e.g., Lotus 1-2-3, Paradox data base) as well as Agency specific applications (e.g., Financial Management System, Property Management). The interactive multi-media use of CD-ROM will be investigated as a way of providing product/service information to target audiences.

Graphics & Networks - *Explore the use of new compression technologies so that graphics can be handled efficiently.* Transmitting large compressed graphic files over networks has proven to be difficult. Since graphic files are extremely large, even compressed files take a long time to transmit. In addition, many compressed graphics files consume much space on computer storage media (e.g., hard disks, floppy disks). Major improvements in compression technology took place this year that promise to remedy this situation. One of these is fractal compression, a new technique for compressing data at a higher ratio than here-to-fore has been possible. Commercial products using fractal compression, have achieved ratios of 500 to 1; 1000 to 1 compression will be introduced into the market place soon.

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Object Oriented Technology - *Investigate object oriented technology* - now being used in many applications throughout the Agency, and will be the way in which most future software applications will be developed. Object Oriented Technology is based on the premise that most applications are made up of routines (e.g., data entry, browsing data, data checks, report generation) that are similar to each other in most respects. Computer code has been developed to duplicate generic routines. An application programmer only has to add parameters to this code to customize the routine to satisfy end-user needs. The programmer does not have to write a program from the scratch. This greatly speeds up the development process for new or modifying existing application programs. This technology can reduce the backlog of programs that Agency end users need.

The Windows environment is a good example of an object oriented application. Many off-the-shelf packages (e.g., Lotus 1-2-3, Paradox, WordPerfect) have been converted to object-oriented programs running within the Windows environment. There are application development program languages that also are available for Windows (e.g., Visual Basic, HSC Interactive, Multi-media Toolbook). The Agency will address issues (e.g., training) necessary to change the way existing computer professionals design and develop applications.

The Agency is also using Object Oriented Technology in developing application programs with the Texas Instrument's IEF (Information Engineering Facility) computer assisted systems engineering (CASE) tool. The Agency's Information Strategy Plan development team has input the characteristics of the data model of a business area to a level of detail that will allow the IEF tool to generate computer program code. When programmers want to change the program, they will input the new characteristics and the IEF tool will generate the new code. The IEF programmer of the future will not touch the actual computer code.

486, Pentium, Alpha Chip Technology - *Determine the role that Pentium (Intel Corporation) and Alpha Chip (Digital Equipment Corporation) technology will play in future Agency applications.* Although the capability of the 486 micro processor will satisfy present needs for faster processors and larger amounts of memory and storage, future applications will require more powerful microprocessors. The Pentium and Alpha Chip usher in a new breed of PC computer technology for the desk-top— i.e., multi-processing.

In this mode, the computer has several processors on the chip and can do several activities at a time (e.g., printing, file access, calculations, compression, decompression).

In the future USIA environment, where we will be using multi-media, client server technology over distributed data bases, and advanced telecommunications networks, multi-processor technology will be a key element in operating efficiently.

Groupware Software - *Determine Groupware Software that will allow the many different software packages within the Agency to "work together."* In a complex computer environment, such as the one evolving in USIA, there is a need to locate, move, store, compute and present data originally developed by different software packages that "do

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not talk to each other." Groupware Software provides a software mechanism for diverse computer programs, representing different manufacturers, to "talk to each other."

Parallel Processing Computers - *Determine the role of parallel processing computing in the Agency.* Parallel processing computers are now being used extensively in computation intensive (e.g., Weather Bureau) or transaction intensive environments (e.g., commercial banks - several million transactions per hour). At the present time, USIA has no need for such computing power.

The future, however, may change this requirement. When the Agency implements the Data, Information, and Technology Architectures that the ISP team is now defining, the framework will be in place to develop expert systems. Expert systems, using the principles of artificial intelligence, is a mature technology now being used throughout the commercial world. These automated systems have been developed to determine the best ways of doing business by optimizing enterprise resources and processes in ways ranging from automated help desks to manufacturing consumer products. The Agency, once it has its information infrastructure in place, will be poised to use expert system technology. When expert systems are considered, parallel processing computers will be a major factor in considering the future mix of the Agency's mainframe, mini-, and microcomputers.

APPENDIX I

STRATEGIC INFORMATION RESOURCES MANAGEMENT (IRM) PLAN

(Complete Version)

FISCAL YEARS 1994 - 1998

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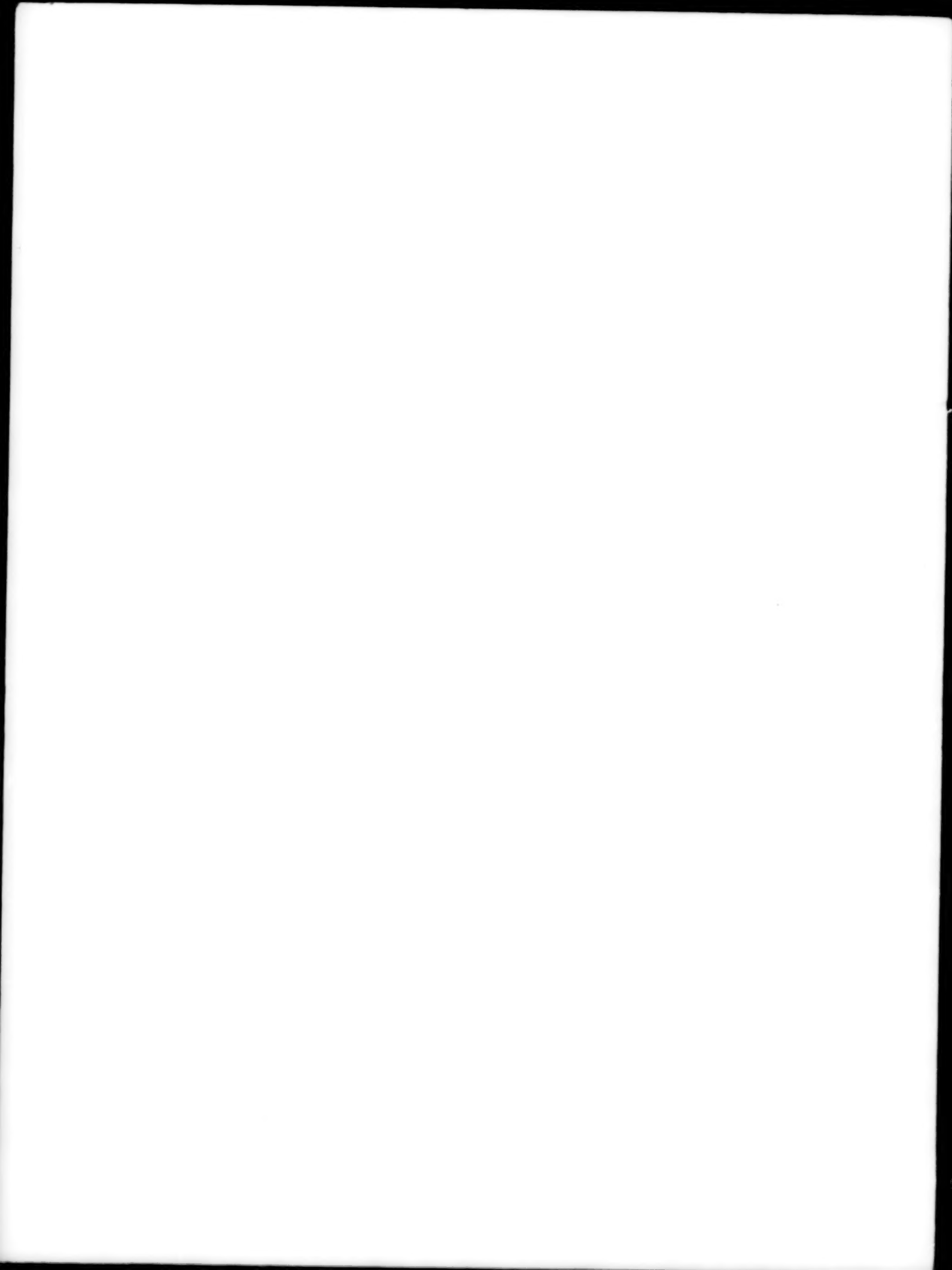
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